

The excitability of spinal motor neurons after spinal injuries and spinal cord

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Abstract

In experiments on models of spinal injuries and spinal cord in 79 laboratory rats, we found changes in reflexes revealed by electromyographic evaluation of spinal cord function during the recovery process. It is established that the parameters of calf muscle reflex responses change immediately after spinal cord injury and that the severity of changes in motor responses in the late posttraumatic period depends on the degree of damage. These data suggest a restriction of supraspinal control caused by spinal cord injury. There is a gradual recovery of the reflex excitability of the motor neurons of spinal motor centers, but the state of the peripheral part of the neuro-motor system is deteriorated. This work may be useful for the formation of ideas about the mechanisms of motor disorders and their correction in patients with a spinal cord injury with changing and descending influences on spinal afferent motor centers. This research was supported by the Russian Foundation for Basic Research 13-04-01746 a. © IDOSI Publications, 2013.

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Keywords

Anxiety motor neuron, Electroneuromyography, Spinal centers, Spinal cord injury